

REMARKS

Applicants are amending their claims in order to further clarify the definition of various aspects of the present invention. Specifically, Applicants are cancelling claims 3-13, and are adding new claims 14 and 15 to the application. Claim 14 defines a method for producing *baitang* soup, including, inter alia, after adding an extraction medium to a specified raw material to obtain a mixture, heating the mixture under a pressurized condition, and after heating under a pressurized condition, heating the mixture under normal pressure, to obtain an extract; and, performing a solid-liquid extraction for the extract, to obtain a liquid extract, separating the liquid extract into oily and aqueous phases, adding oil and fat to the aqueous phase to obtain a resulting mixture, and mixing and emulsifying the resulting mixture to prepare the *baitang* soup. In connection with claim 14, note, for example, from page 3, line 24, through page 5, line 12; and page 8, lines 9-16, of Applicants' specification. Note also Example 1 starting on page 11 of Applicants' specification, and in particular disclosure of the heat and pressurization treatment on page 11, lines 13-17, with subsequent treatment at 95°C overnight "with the lid open" (see page 11, lines 17-21). Claim 15, dependent on claim 14, recites the additional step of concentrating the aqueous phase. Note, for example, page 5, lines 13-18, of Applicants' specification.

Initially, it is respectfully requested that the present amendments be entered, notwithstanding the Finality of the Office Action mailed April 15, 2010. In this regard, noting previously considered claims, and arguments in connection therewith, and, moreover, noting that all of the previously considered claims are being cancelled without prejudice or disclaimer, it is respectfully submitted that the present

amendments materially limit issues remaining in connection with the above-identified application; and, at the very least, present the claims in better form for appeal.

Noting portions of Applicants' specification referred to in the foregoing, it is respectfully submitted that the present amendments clearly do not raise any issue of new matter; and it is respectfully submitted that the present amendments do not raise any substantially new issues. Noting contentions by the Examiner in the Office Action mailed April 15, 2010, it is respectfully submitted that the present amendments are clearly timely.

In view of the foregoing, it is respectfully submitted that Applicants have made the necessary showing under 37 CFR 1.116(b); and that, accordingly, entry of the present amendments is clearly timely.

Applicants respectfully submit that all of the claims presented for consideration by the Examiner patentably distinguish over the teachings of the references applied by the Examiner in rejecting claims in the Office Action mailed April 15, 2010, that is, the teachings of U.S. Patent Application Publication No. 2007/0110865 to Fujimoto, et al., and Japanese Patent Document No. 5-3772 (Watanabe), under the provisions of 35 USC 103.

It is respectfully submitted that the teachings of these applied references do not disclose, nor would have suggested, such a method for producing *baitang* soup, as in the present claims, including, inter alia, after adding an extraction medium to a raw material containing meat or bone of animals to obtain a mixture, heating the mixture under a pressurized condition, and subsequent thereto heating the mixture under normal pressure, to obtain an extract, with subsequent steps of performing a solid-liquid separation for the extract, to obtain a liquid extract, separating the liquid

extract into oily and aqueous phases, adding oil and fat to the aqueous phase, and mixing and emulsifying the resulting mixture to prepare the *baitang* soup. See claim 14.

In particular, it is respectfully submitted that the teachings of these references do not disclose, nor would have suggested, the heating steps, respectively under a pressurized condition and under normal pressure, to obtain the extract, as discussed infra.

Furthermore, it is respectfully submitted that the teachings of the applied references do not disclose, nor would have suggested, such method as in the present claims, having features as discussed previously in connection with claim 14, including the heating steps respectively under a pressurized condition and under normal pressure. By applying heating under both a pressurized condition and followed by heating under normal pressure, a desired *baitang* soup with high emulsion stability can be obtained, such *baitang* soup being in which 30 wt% or more of the proteins contained in the aqueous phase have an isoelectric point at least 1.5 lower than the pH of the *baitang* soup.

Thus, *baitang* soup 1, set forth in Example 1(1) starting from page 11 of Applicants' specification, uses an extraction operation of heating under pressurized conditions followed by heating under normal pressure, as can be seen on page 11, lines 13-19, of Applicants' specification. In contrast, Example 1(4), starting from page 15 of Applicants' specification, only utilized a pressurization treatment (compare with the preferred processing in Fujimoto, et al., in paragraph [0020] on page 2 thereof), without further heating at normal pressure. Note page 15, lines 5-10, of Applicants' specification.

As seen in Table 1 on page 17 of Applicants' specification, soup 4 prepared in Example 1(4) had separation of the oily phase, while Example 1(1) had a good emulsification state, after one month. Note also comparison of the rate of emulsion stability of soup 1, as compared with soup 4, in Table 1. It is respectfully submitted that this evidence in Applicants' specification shows unexpectedly better results achieved according to the present invention, wherein heating is performed with both a heating under a pressurized condition and heating under normal pressure, showing advantages achieved by the presently claimed invention.

The present invention is directed to a method for producing *baitang* soup, and for improving emulsion stability thereof.

When *baitang* soup is subjected to heat sterilization, a problem arises that the emulsion stability decreases with time. As techniques for avoiding such decrease in emulsion stability, various materials such as starch, gelatin, emulsifiers, etc., are added; however, addition of these substances may cause deterioration of texture and taste, and reduction of operability.

It is also known to allow two kinds of gelatin having different isoelectric points to be contained in the soup as an emulsifier; however, this technique has the problem that the two kinds of gelatin must be added.

Thus, it is still desired to provide a method for producing *baitang* soup with high emulsion stability, which can be produced by a relatively simple method.

Against this background, Applicants provide a method for producing *baitang* soup having improved emulsion stability, and wherein such *baitang* soup with improved emulsion stability can be provided in a simplified process, without the need for complex procedures and equipment. Applicants have found that by first heating

under pressurized conditions, and, subsequently, a second heating under normal pressure, to obtain an extract; with, subsequently, a solid-liquid separation being performed for the extract, to obtain a liquid extract, a *baitang* soup with high emulsion stability, being a soup in which at least 30 wt% of the proteins contained in the aqueous phase have an isoelectric point at least 1.5 lower than the pH of the *baitang* soup, can be achieved. Thus, *baitang* soup having high emulsion stability can be provided by simple processing, using heating under specified pressure conditions.

Watanabe discloses an emulsifying agent for foods, cosmetics, etc., not damaging a flavor and fragrance and having excellent safety for humans, which comprises (A) a gelatin having 6.5-9, preferably 8-9, isoelectric point and (B) a gelatin having 4.5-5, preferably 5+ or -0.3 isoelectric point, in a ratio of 95:5 to 10:90 by weight.

It is respectfully submitted that this reference does not disclose, nor would have suggested, the process as in the present claims, including, inter alia, the heating of the mixture obtained by adding an extraction medium to a raw material containing meat or bone or animals, under a pressurized condition and subsequent thereto under normal pressure, to obtain an extract, together with the further processing steps in claim 14, to prepare the *baitang* soup.

It is respectfully submitted that the additional teachings of Fujimoto, et al. would not have rectified the deficiencies of Watanabe, such that the presently claimed invention as a whole would have been obvious to one of ordinary skill in the art.

Fujimoto, et al. discloses a method for producing pork bone extract, wherein extraction from the raw material is carried out using an extraction medium such as an aqueous medium or an organic solvent. See paragraph [0015] on page 1 of this patent document. This patent document goes on to disclose that extraction is carried out by adding the extraction medium to the raw material and heating at 60-150°C for 30 minutes to 1 week; and that, for the extraction, processing is conducted under heating conditions, preferably under heating and pressurizing conditions. Note paragraphs [0019] and [0020] on page 2 of this patent document. This patent document goes on to disclose that after the extraction operation, a liquid extract is obtained according to a solid-liquid separation method, and the obtained liquid extract can be used as the pork bone extract, with ultra high temperature sterilization preferably being carried out after preparation of the pork bone extract. Note paragraphs [0021] and [0030] of this patent document. See also paragraphs [0023] and [0024] on page 2 of this patent document, describing that the liquid extract obtained by the solid-liquid separation may be concentrated; and that in the case of the liquid extract from which oil and fat has been separation or its concentrate, emulsification is carried out after addition of an appropriate amount of the separated oil and fat.

Even assuming, arguendo, that the teachings of Fujimoto, et al. were properly combinable with the teachings of Watanabe, such combined teachings would have neither disclosed nor would have suggested the presently claimed method, including, inter alia, the heating steps under different pressure conditions as in the present claims, after adding an extraction medium to a raw material, to obtain an extract, with additional steps as in the present claims, and advantages thereof.

In view of the foregoing comments and amendments, entry of the present amendments, and reconsideration and allowance of the claims pending in the above-identified application, are respectfully requested.

Applicants request any shortage of fees due in connection with the filing of this paper be charged to the Deposit Account of Antonelli, Terry, Stout & Kraus, LLP, Deposit Account No. 01-2135 (case 1021.46326X00), and please credit any excess fees to such Deposit Account.

Respectfully submitted,

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